APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,415	01/18/2002	Santosh C. Lolayekar	MARA-01001US0 SBS	7003

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EXAMINER
WALSH, JOHN B

ART UNIT	PAPER NUMBER
2151	

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _24 October 2005_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-49_ is/are pending in the application.

    4a) Of the above claim(s) _37-48_ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-36 and 49_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _1/18/02; 4/8/03_.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2.   Claims 14 and 49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

Claim 14 recites, "without using CPU resources" and claim 49 requires the use of a

processor "instructions executable by a processor". It is unclear how the same invention is both

implemented with a processor and without a processor. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1-18, 20-23, 34-36 and 49 are rejected under 35 U.S.C. 102(e) as being

anticipated by U.S. Patent No. 6,400,730 to Latif et al.

As concerns claims 1 and 11, a method for use in a system for storing and accessing data,

the method comprising: (a) receiving a packet formatted in accordance with a first protocol from

a first device that operates in accordance with the first protocol (column 2, lines 55-60); (b)

translating the packet to one formatted in accordance with a second protocol (column 2, lines 64-

65); (c) forwarding the packet to a second device that operates in accordance with the second

protocol (column 2, lines 66-column 3, line 5); and wherein steps (a)-(c) occur without buffering

the packet (column 11, lines 55-63).

As concerns claims 2, 13, 21 and 36, wherein steps (a)-(c) occur at wire speed (Latif et al.

disclose switches for performing the functions, switches can operate at wire speed).

As concerns claim 3, the method of claim 1, wherein translating includes mapping at least

some of the fields of the packet formatted in accordance with the first protocol into the packet

formatted in accordance with the second protocol (figure 6a).

As concerns claim 4, the method of claim 3, wherein translating further includes adding

information into any fields of the packet formatted in accordance with the second protocol that

are not mapped from the packet formatted in accordance with the first protocol (figure 6a).

As concerns claims 5, 7, 15 and 17, wherein the first protocol is iSCSI and the second

protocol is Fibre Channel and wherein the first protocol is Fibre Channel and the second

protocol is iSCSI (column 6, lines 9-11, 52; abstract, lines 1-8).

As concerns claims 6, 8, 16 and 18, wherein the first protocol is iSCSI embedded in TCP

and wherein the second protocol is iSCSI embedded in TCP (column 7, lines 4-6).

As concerns claims 9, 10, 22 and 23, wherein the first device is an initiator and the

second device is a target and wherein the first device is a target and the second device is an

initiator (column 5, line 57).

As concerns claim 12, a method for use in a system for storing and accessing data, the

method comprising: receiving a packet formatted in accordance with a first recognized protocol

(column 2, lines 55-60); and mapping the fields of the packet to a new packet formatted in

accordance with a second protocol without buffering the packet (figure 6a, column 11, lines 55-

63).

As best understood concerning claim 14, the method of claim 12, wherein mapping

includes mapping the fields of the packet to a new packet formatted in accordance with a

second protocol without buffering and without using CPU resources (figure 6a, column 11,

lines 55-63).

As concerns claim 20, a method for use in a system for storing and accessing data, the

method comprising: receiving a packet from a first device (column 2, lines 55-60), the packet

formatted in accordance with one of the iSCSI or Fibre Channel protocols (column 2, lines 60-

63; column 6, lines 9-11, 52; abstract, lines 1-8); if the packet is formatted in accordance with

the iSCSI protocol, translating the packet into a Fibre Channel packet by mapping at least some

of the fields from the packet formatted in accordance with the iSCSI protocol into the Fibre

Channel packet; if the packet is formatted in accordance with the Fibre Channel protocol,

translating the packet into an iSCSI packet by mapping at least some of the fields from the

packet formatted in accordance with the Fibre Channel protocol into the iSCSI packet (figure

6a, column 11, lines 55-63); forwarding the packet as translated to a second device (column 2,

lines 66-column 3, line 5); and wherein all of the above steps are performed without buffering

(column 11, lines 55-63).

As concerns claim 34, a method for use in a system for storing and accessing data, the

method comprising: receiving at an ingress linecard (column 19, line 26) a packet formatted in

accordance with a first protocol, the packet destined for a virtual target with a virtual target

address (IP address); the ingress linecard retrieving information about the virtual target from a

virtual target descriptor, the information including a flowID (port ID, figure 6c), and placing a

virtual target descriptor identifier and the flowID, in a local header of the packet (figure 6a);

the ingress linecard forwarding the packet to a fabric (figure 5, 240), which forwards the packet

to an egress linecard in accordance with the flowID; the egress linecard using the virtual target

descriptor identifier to identify information about a physical target associated with the virtual

target, including whether the physical target requires a packet formatted in accordance with a

second protocol, and using the information about the physical target to convert a virtual target

block address to a physical target block address and to translate, if necessary, the format of the

packet from the first protocol to the second protocol (column 2, lines 64-65); and the egress

linecard sending the packet to the physical target using the physical target block address

(column 2, lines 66-column 3, line 5).

As concerns claim 35, the method of claim 34, wherein all of the steps are performed

without buffering (column 11, lines 55-63).

As best understood concerning claim 49, a set of software instructions (column 2, lines

53-54) stored on at least one medium in a switch for use in a system for storing and accessing

data, which instructions are executable by a processor, the instructions including: instructions

for receiving a packet from a first device (column 2, lines 55-60), the packet formatted in

accordance with one of the iSCSI or Fibre Channel protocols (column 6, lines 9-11, 52,

abstract, lines 1-8); if the packet is formatted in accordance with the iSCSI protocol,

instructions for translating the packet into a Fibre Channel packet by mapping at least some of

the fields from the packet formatted in accordance with the iSCSI protocol into the Fibre

Channel packet; if the packet is formatted in accordance with the Fibre Channel protocol,

instructions for translating the packet into an iSCSI packet by mapping at least some of the

fields from the packet formatted in accordance with the Fibre Channel protocol into the iSCSI

packet (column 6, lines 9-11, 52; abstract, lines 1-8); instructions for forwarding the packet as

translated to a second device (column 2, lines 66-column 3, line 5); and wherein all of the above

instructions do not require the packet to be buffered (column 11, lines 55-63).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

6.   Claims 19 and 24-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 6,400,730 to Latif et al.

As concerns claims 19 and 24-33, the type of packet (i.e. command, response, etc.) is

unimportant such that it does not effect the patentable operation of the invention, since it is the

protocol format that is of concern to the invention, therefore the type of packet is seen as an
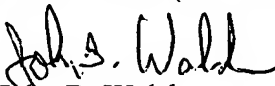
obvious design choice.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. Higgins '841 discloses writing message data without buffering.

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to John B. Walsh whose telephone number is 571-272-7063. The

examiner can normally be reached on Monday-Wednesday from 5:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John B. Walsh
Primary Examiner
Art Unit 2151